## WHAT IS CLAIMED IS:

1. A compound of formula (I):

$$R_{4}O$$
 $R_{2}$ 
 $R_{4}O$ 
 $R_{5}$ 
 $R_{4}O$ 
 $R_{5}$ 
 $R_{4}O$ 
 $R_{5}$ 
 $R_{4}O$ 
 $R_{5}$ 
 $R_{6}$ 
 $R_{7}$ 

2

3

1

1

1

wherein

- each of  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_7$  independently is H or alkyl;
- 5 each of R<sub>4</sub> and R<sub>6</sub> independently is alkyl;
- R<sub>5</sub> is H or  $P(O)(OR_a)_2$ , in which  $R_a$  is H or alkyl;
- 7 T is H, or together with X is =N;
- X is a bond, O, S, or  $NR_b$ , in which  $R_b$  is H or alkyl; or together with T, is =N; and
- 9 Y is 5-membered heteroaryl or heterocyclyl, optionally substituted with one or more
- of halogen, alkyl, cyclyl, aryl, heteroaryl, heterocyclyl, -OR<sub>c</sub>, -NR<sub>c</sub>R<sub>c</sub>', -SR<sub>c</sub>,
- -CN, -NO<sub>2</sub>, -SO<sub>2</sub>R<sub>c</sub>, -C(O)OR<sub>c</sub>, -C(O)NR<sub>c</sub>R<sub>c</sub>', -NHC(O)R<sub>c</sub>, -(CH<sub>2</sub>)<sub>q</sub>OPO<sub>3</sub>H<sub>2</sub>,
- -CH<sub>2</sub>C(O)NOR<sub>c</sub>", and  $(CH_2)_m$  Z  $(CH_2)_p$  ; in which each of R<sub>c</sub> and R<sub>c</sub>' independently
- is H or alkyl; Rc" is H, alkyl, or silyl; Z is O or NH; each of m and n independently is 0 or 1;
- p is 0, 1, or 2; q is 1, 2, 3, or 4; and each of R<sub>8</sub> and R<sub>9</sub> independently is H, alkyl, aryl,
- heteroaryl, heterocyclyl,  $-OR_d$ ,  $-NR_dR_d$ ',  $-SR_d$ , -CN,  $-NO_2$ ,  $-SO_2R_d$ ,  $-C(O)OR_d$ ,  $-C(O)NR_dR_d$ ',
- -NHC(O) $R_d$ , or -NHC(O)O $R_d$ , in which each of  $R_d$  and  $R_d$ ' independently is H or alkyl.
  - 2. The compound of claim 1, wherein X is NH, and T is H.
  - 3. The compound of claim 2, wherein each of  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_7$  is H.

- 1 4. The compound of claim 3, wherein  $R_5$  is H.
- The compound of claim 3, wherein  $R_5$  is  $P(O)(OH)_2$ .
- The compound of claim 3, wherein each of  $R_4$  and  $R_6$  is methyl.
- The compound of claim 6, wherein  $R_5$  is H.
- 1 8. The compound of claim 7, wherein Y is 5-membered heteroaryl.
- 1 9. The compound of claim 8, wherein Y is
- 1 10. The compound of claim 8, wherein Y is 5-membered heteroaryl containing two to four ring heteroatoms.
- 1 11. The compound of claim 10, wherein Y is
- 1 12. The compound of claim 10, wherein Y is NO<sub>2</sub>.
- 1 13. The compound of claim 10, wherein Y is s, s, or
- 1 14. The compound of claim 10, wherein Y is
- 1 15. The compound of claim 10, wherein Y is school Shapes

- 1 16. The compound of claim 10, wherein Y is
- 1 17. The compound of claim 10 wherein Y is  $(CH_2)_m^{R_9}$
- 1 18. The compound of claim 17, wherein m is 1.
- 1 19. The compound of claim 18, wherein n is 0.
- 1 20. The compound of claim 19, wherein Z is O.
- 1 21. The compound of claim 18, wherein n is 1.
- 1 22. The compound of claim 21, wherein R<sub>9</sub> is C(O)OR<sub>d</sub>.
- 1 23. The compound of claim 22, wherein Z is O.
- 1 24. The compound of claim 17, wherein m is 0.
- 1 25. The compound of claim 7, wherein Y is 5-membered heterocyclyl.
- The compound of claim 2, wherein each of  $R_4$  and  $R_6$  is methyl.
- The compound of claim 1, wherein X and T together are =N.
- 1 28. The compound of claim 27, wherein each of  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_7$  is H.
- The compound of claim 28, wherein each of  $R_4$  and  $R_6$  is methyl.
- 1 30. The compound of claim 29, wherein  $R_5$  is H.

- 1 31. The compound of claim 28, wherein  $R_5$  is H.
- The compound of claim 27, wherein each of  $R_4$  and  $R_6$  is methyl.
- 1 33. A method for treating cancer, comprising administering to a subject in need thereof an effective amount of a compound of formula (I):

$$R_1$$
 $R_2$ 
 $R_3$ 
 $R_4$ 
 $R_4$ 
 $R_5$ 
 $R_7$ 
 $R_6$ 
 $R_7$ 
 $R_8$ 
 $R_7$ 
 $R_8$ 
 $R_7$ 
 $R_8$ 
 $R_7$ 
 $R_8$ 
 $R_7$ 
 $R_8$ 
 $R_9$ 
 $R_9$ 

4 wherein

3

5 each of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>7</sub> independently is H or alkyl;

each of  $R_4$  and  $R_6$  independently is alkyl;

7  $R_5$  is H or  $P(O)(OR_a)_2$ , in which  $R_a$  is H or alkyl;

8 T is H, or together with X is =N;

Y is a bond, O, S, or  $NR_b$ , in which  $R_b$  is H or alkyl; or together with T, is =N; and

Y is 5-membered heteroaryl or heterocyclyl, optionally substituted with one or more

of halogen, alkyl, cyclyl, aryl, heteroaryl, heterocyclyl, -OR<sub>c</sub>, -NR<sub>c</sub>R<sub>c</sub>', -SR<sub>c</sub>,

12 -CN, -NO<sub>2</sub>, -SO<sub>2</sub>R<sub>c</sub>, -C(O)OR<sub>c</sub>, -C(O)NR<sub>c</sub>R<sub>c</sub>', -NHC(O)R<sub>c</sub>, -(CH<sub>2</sub>)<sub>q</sub>OPO<sub>3</sub>H<sub>2</sub>,

-CH<sub>2</sub>C(O)NOR<sub>c</sub>", and  $(CH_2)_m$  Z  $(CH_2)_p$   $(CH_2)_p$  ; in which each of R<sub>c</sub> and R<sub>c</sub>' independently

is H or alkyl; Rc" is H, alkyl, or silyl; Z is O or NH; each of m and n independently is 0 or 1;

p is 0, 1, or 2; q is 1, 2, 3, or 4; and each of  $R_8$  and  $R_9$  independently is H, alkyl, aryl,

heteroaryl, heterocyclyl,  $-OR_d$ ,  $-NR_dR_d$ ',  $-SR_d$ , -CN,  $-NO_2$ ,  $-SO_2R_d$ ,  $-C(O)OR_d$ ,  $-C(O)NR_dR_d$ ',

-NHC(O)R<sub>d</sub>, or -NHC(O)OR<sub>d</sub>, in which each of R<sub>d</sub> and R<sub>d</sub>' independently is H or alkyl.

- 1 34. The method of claim 33, wherein X is NH, and T is H.
- The compound of claim 34, wherein each of  $R_4$  and  $R_6$  is methyl.
- The compound of claim 34, wherein each of  $R_1$ ,  $R_2$ ,  $R_3$ , and  $R_7$  is H.
- 1 37. The compound of claim 36, wherein  $R_5$  is H.
- The compound of claim 36, wherein  $R_5$  is  $P(O)(OH)_2$ .
- The compound of claim 36, wherein each of  $R_4$  and  $R_6$  is methyl.
- 1 40. The compound of claim 39, wherein  $R_5$  is H.
- The compound of claim 40, wherein Y is 5-membered heteroaryl.
- 1 42. The compound of claim 41, wherein Y is
- 1 43. The compound of claim 41, wherein Y is 5-membered heteroaryl containing 2 two to four ring heteroatoms.
  - 44. The method of claim 43, wherein Y is

2

1